



5th September 2013

British English edition

Issue Number 205

In this issue

Wildfire in California
Birmingham City's new library
Best and worst city survey
Learning to migrate
Pakistan and Afghanistan talks
Microsoft and Nokia
Famous speech 50th anniversary
How tiny frog hears
South American snowfalls
Pacific Islands meeting
Rice field art
Little Mermaid centenary
Ancient Banyan tree felled
Dresden's new bridge
Galilean moon eruption
Tomatina tickets
Japan's maglev train
'Mega Canyon' discovered
Insects at ancient eruption
Glossary Crossword and Wordsearch Puzzle



UN inspectors visit a place suspected of being hit by a chemical weapon attack in Damascus, the capital of Syria

SYRIA AND MILITARY ACTION

On 3rd September, Barack Obama, the president of the USA, said he believed that a missile strike on Syria should take place. He insisted that Syria had to be punished. This, the president explained, was because he was sure the Syrian regime, or its government, had carried out a chemical weapon attack on its own people.

The use of chemical weapons is unlawful. Certain types of chemicals were first used as weapons during the First World War (1914 – 1918). Yet in the 1920s an international treaty was signed that banned all chemical weapon attacks.

Chemical weapons include highly poisonous, or toxic, nerve gases. These are very dangerous and can quickly kill many thousands of people. The weapons can be put inside artillery shells or rockets. They can also be dropped from planes and fitted to both short- and long-range missiles. Chemical weapons are

often described as Weapons of Mass Destruction (WMD).

Not everyone agrees with Mr Obama. Syrian leaders insist that they have not used any chemical weapons. Vladimir Putin, the president of Russia, believes them. Mr Putin says a military strike on Syria could only be made if the United Nations (UN) Security Council agreed.

Countries such as Russia and Iran have worked with Syria for many years. These nations have warned that it would be wrong for the USA, or others, such as the UK and France, to carry out any air strikes on Syria. Many people in the USA, the UK and France agree. They worry that military strikes could mean that their own countries get 'sucked' into a war. The recent war in Iraq, they argue, is an example of how military action in the Middle East can easily go badly wrong.

LEVEL UP!

Use

ONLINE EXTRA

Newsademic.com



TO JOIN VISIT
WWW.NEWSADEMIC.COM

Fighting in Syria has been going on for over two years. It began after the government ordered the army to use weapons to stop street protests. The demonstrators were complaining about the country's president, Bashar al-Assad, his government and the police force. Mr al-Assad and his family have controlled Syria for over 40 years.



It's thought that the fighting in Syria has been the cause of at least 100,000 deaths. Over two million Syrians have crossed the borders into Turkey, Jordan, Lebanon and Iraq to get away from the fighting. Many of these people are now living in special refugee camps. A recent UN report says that around 5,000 people are arriving at these camps every day.

The war in Syria is between the Syrian army and several groups that oppose Mr al-Assad and his government. These opposition groups are often called 'rebels'. In the recent past many countries have declared that they want the rebels to win. These nations include the USA, the UK, France and several Arab countries, such as Qatar and Saudi Arabia.

Many people in certain parts of Syria support the Syrian regime. Like Mr al-Assad they claim the rebels are terrorists who want to destroy their country. Even though it has never admitted it, Syria is known to have stores of chemical weapons.

Last year Mr Obama warned the Syrian regime. He said that any use

of chemical weapons in Syria would be a 'red line'. David Cameron, the prime minister of the UK, and François Hollande, the president of France, gave similar warnings. A red line is a point beyond which a person or group will no longer talk or negotiate. Most people believe that Mr Obama meant that he would be prepared to order some type of military strike on Syria, if chemical weapons were ever used.

Over the last 12 months the rebels have claimed that the Syrian army has attacked them with chemical weapons several times. These attacks were small and not many people were affected. One of them, the rebels say, took place in the city of Aleppo.

However, Syrian government officials insist that no chemical weapons were used. They say the rebels probably organised a few small gas attacks. They did this, the officials explain, to blame it on the Syrian army. If others believe that the Syrian army was responsible countries like the USA would be more likely to help the rebels.

The UN wanted to send inspectors to Syria to find out if chemical weapons were used in places like Aleppo. After many months of talks the Syrian government agreed. A team of UN inspectors arrived in Damascus, the Syrian capital, on 18th August.

Three days after the inspectors arrived there were reports that a much bigger chemical attack had taken place. It happened in a part of Damascus called Ghouta. This area of the city has been under the control of the rebels. They said rockets had landed that contained a poisonous gas.

French doctors working in several hospitals in Damascus said that they had treated over 3,600 people on the day of the attack. All looked as if

they had inhaled some type of poisonous gas. The doctors estimated that around 300 people died. Most were civilians and not rebel fighters. The Syrian government says it was not responsible for the attack. It blames the rebels. The government says 'why would it carry out a chemical attack if the UN inspectors were staying in Damascus?'

Three days later the UN inspectors went to Ghouta. They took samples of blood and hair from people who had been affected by the gas. The inspectors then left Syria and travelled to the Netherlands. They are expected to report their findings in two weeks. However, the inspectors will only say if chemical weapons were used. They will not blame one side or the other.

After the attack on Ghouta Mr Cameron arranged for the UK's parliament to vote on air strikes against Syria. To the surprise of many people the majority of the elected members voted against them. This means the UK will now not take part in any future military action.

After the vote in the UK, Mr Obama declared that there would be a vote in Congress about air strikes on Syria. However, this vote is unlikely to take place before 9th September. John Kerry, the American secretary of state, says he believes that around 1,400 people were killed in the chemical attack in Damascus. Most, he claimed, were women and children.

Mr Hollande says France is willing to launch air strikes in Syria. Yet it will not do so unless others also take part. Many people think that Mr Obama will have to take action. If not, they say, the USA will look weak. Mr Obama says that if the Syrian regime is not punished for the recent chemical attack more will happen in future. ■

RIM FIRE

Around 5,000 firefighters have been trying to put out a wildfire in the state of California, in the USA. The fire started in the middle of August. On 1st September, Fire chiefs estimated that around 75% of the flames were under control.



Satellite picture of the Rim Fire, in California

The wildfire, which has become known as the Rim Fire, is one of the largest in California's history. The name comes from a lookout, or viewpoint, that is nicknamed the 'Rim of the World'. It was near this lookout that the fire first started.

The wildfire is close to the Yosemite National Park. This park is one of California's most popular visitor attractions. Many people visit Yosemite to see its sequoias and steep granite cliffs. Sequoias are huge trees, which are some of the oldest and largest living things in the world.

Because of high temperatures and a lack of rain, many places in California are now very dry. If a fire starts in wooded areas or places covered in bushes and grass (often called scrubland, or scrub) it's likely to spread very quickly. So far the Rim Fire has destroyed about 960 square kilometres (370 square miles) of trees and scrub. Not many people live in this part of California, but several houses and over 100 buildings have also been destroyed.

Planes and helicopters have been dropping water on the flames. Drones, or Unmanned Aerial Vehicles (UAVs), have also been used. These are small aircraft that are remotely controlled. The drones have been sending back pictures of the fire. Fire chiefs have therefore been able to work out where the flames are most likely to spread. Around 650 prisoners have been helping to control the blaze.

Large wildfires are very difficult to extinguish, or put out. Usually firefighters just try to control them. Once this happens the fires may be extinguished by rain or they eventually die out, as there is nothing left to burn.

One of the best ways to stop wildfires is to create barriers called firebreaks. Long lines of trees are cleared, or cut down. Once the fire reaches the cleared area it can be stopped from spreading to the other side. Sometimes other smaller fires are deliberately started. These are then controlled to create even bigger firebreaks.

It is not unusual for lightning to start wildfires. Yet fire officials say that when the Rim Fire began there was no lightning in this part of California. They therefore suspect that human activity is to blame.

Fire chiefs say that they do not expect the fire to be finally extinguished until the last week of September. ■

NEW LIBRARY OPENS

On 3rd September, Malala Yousafzai officially opened the city of Birmingham's new library. Birmingham is the second largest city in the UK. The new library is one of the biggest in Europe.

Ms Yousafzai is a teenage girl who used to live in the north of

Pakistan. Almost 12 months ago a Taliban supporter shot her in the head while she was on a bus. Ms Yousafzai had been campaigning for better education for girls in her country. Many Taliban supporters believe that girls should not go to school or university.

After being treated in Pakistan Ms Yousafzai was flown to the UK. She had several medical operations in a hospital in Birmingham. Now she and her family live in the city.

Work on building the new library began four years ago. Before this a competition was held to choose the design of the building. A firm of architects from The Netherlands, called Mecanoo, created the winning design.

The new building has nine floors and a roof garden. Inside are about one million books. The library owns

NEWSCAST

COCKROACH ESCAPE — In many countries cockroaches are believed to be pests. However, in China some farmers breed them. This is because the insects are used to make certain types of traditional Chinese medicines. Some people believe these medicines can cure serious illnesses. One farmer recently set up a special plastic greenhouse to breed cockroaches. He spent a lot of money buying cockroach eggs. After the eggs hatched he fed the insects fruit and biscuits. But then an unknown person damaged his greenhouse. Inside were around 1.5 million cockroaches. All escaped. Most of the insects are now believed to be nesting in nearby cornfields. Disease control officials have gone to the area to try to get rid of them.



several very valuable books. One, which is 400 years old, is a collection of William Shakespeare's plays. William Shakespeare (1564 – 1616) is one of the most famous writers in history. His plays are still performed all over the world.



New library building in Birmingham

The book is what's known as a 'First Folio'. Experts think between 750 and 1,000 copies of the 'First Folio' were printed in 1623. It's believed that only 40 complete First Folios still exist. Each contains 36 Shakespeare plays.

The library has a special Shakespeare Room. This is on the top floor. Birmingham City's first library was built in the late 1800s. It had a Shakespeare Room. The Shakespeare Room in the new library has been made to look exactly like the old one. The room contains 43,000 books. It is one of the most important Shakespeare collections in the world.

Another of the new library's valuable books is called *The Birds of America*. It was written and illustrated by John James Audubon (1785 – 1851). Audubon spent 12 years completing all the paintings and drawings. The bird illustrations are life-sized. The book is 90 centimetres (three feet) high and 60 centimetres (two feet) wide. So as well as being one of the world's most valuable books it is also one of the largest. Only 120 copies of Audubon's book still exist today.

Last year one of them sold for £5.1 million (US\$7.9 million).

The new library has at least 200 computers that can be used by visitors. Inside there is a theatre, music rooms and a place where exhibitions can be held.

In a speech, before she officially opened the library, Ms Yousafzai said 'Let us not forget that even one book, one pen, one teacher can change the world'. ■

CITY SURVEY

A research company, which has its headquarters in the UK, has published an annual [survey](#). It lists what, the company says, are the world's best and worst cities to live in. At the top of the list is Melbourne, in Australia. Vienna, the capital of Austria, is in second place.



Melbourne, Australia

There are 140 cities in the survey. The research company checks, or assesses, a number of different things, or categories. It believes these categories show how easy it is for people to live there. They include education, health care, transport, the environment, safety and [stability](#). The survey also looks at crime. It tries to work out the chance of someone becoming the victim of a criminal act in each city. Culture is another category. So a city with many theatres, museums and concert halls scores higher points.

As well as Melbourne, Australia has three other cities, Adelaide, Sydney and Perth, near the top. Three Canadian cities, Vancouver, Toronto and Calgary, are also in the top ten. Amongst the first ten cities, Toronto, with a population of six million, is the largest. Others within the top ten are Helsinki, the capital of Finland, and Auckland, the largest city in New Zealand.

In the past Vancouver was frequently at the top of the list. The research company says that the main reason Vancouver is now in third place is because of increasing traffic problems.

Osaka, in Japan, is at number 12. This means it is the highest ranked city in Asia. The list says that Honolulu, in Hawaii, is the best city in which to live in the USA. It is number 26.

The survey does not include cities such as Kabul, the capital of Afghanistan, and Iraq's capital city, Baghdad. This is because, for many years, there have been frequent bomb attacks and shootings in these cities.

At number 140, or bottom of the list, is Damascus, the capital city of Syria. There has been fighting in Syria for over two years. During the last 12 months it has spread to some parts of Damascus. Many people suspect that poisonous gas was used in one attack in the city in August. This is believed to have killed at least 300 people.

Syria is one of the 'Arab Spring' countries. At the beginning of 2011 street demonstrations began against the presidents of several Arab countries. These demonstrations became known as the Arab Spring. The protests led to the presidents of Tunisia, Egypt, and Yemen being forced to step down. Libya's leader, Colonel Gaddafi, was killed.

Street protests are still held in these countries. Some are violent. In Libya fighting between different groups continues. The capital cities of Arab Spring countries have therefore moved towards the bottom of the survey. Tripoli, Libya's capital, is number 133.

Others near the bottom are the African cities of Harare, Lagos and Douala. Harare is the capital of Zimbabwe, Lagos is the largest city in Nigeria and Douala is in Cameroon. ■

MIGRATION LEARNING

Many birds migrate. Some fly very long distances. How the birds work out where they are, or which way to fly, has puzzled scientists for many years. A new study suggests that for some birds 'experience' might be part of the answer.

For the last eight years researchers from the USA and Germany have been following groups of whooping cranes. They have been recording the journeys the birds make, as they migrate between the American states of Wisconsin and Florida.



Ultra-light aircraft leading whooping cranes

Whooping cranes are an endangered species. Their name comes from the loud noises they make. The birds' 'whooping' sound can be heard several kilometres away. Adults can grow to a height of 1.5 metres (five feet). They have white feathers, a

small red crest on top of their heads and black wingtips. The cranes make their nests in marshland.

Around 60 years ago there were fears that whooping cranes would become extinct. This was because so many of them were being shot by hunters. Today, they are a protected species. It's thought that about 500 are now living in the wild.

Several breeding programmes have been set up. One of these is in Wisconsin. However, there was a problem with getting the chicks, which had been hatched in captivity, to migrate. Nine years ago a project called Operation Migration was set up. The idea was to teach the birds how to migrate to Florida. To do this a small ultra-light aircraft is used. The young birds follow the aircraft, which plays recordings of the sounds whooping cranes make.

Each year, before the winter arrives, a small aircraft leads the newly hatched birds to Florida. This is a distance of about 2,400 kilometres (1,500 miles). After following the aircraft the birds, flying in groups, are able to find their own way back the following summer. Each one is tagged, so it can be tracked.

The researchers have recorded the journeys the cranes make each year. If there is at least one older bird in the group the others are less likely to get lost. Older birds, that have made the journey several times, seem to have learnt to fly in a much straighter line between Wisconsin and Florida. If the one-year-old birds do not have an older 'more experienced' adult in their group they go off course. This might be by as much as 97 kilometres (60 miles). The younger birds therefore seem to learn the migration route from the older ones.

The researchers suspect that other birds that migrate in groups learn

in a similar way. However, they say, the ability of some birds to fly very long distances on their own probably has something to do with their genes. ■

PAKISTAN, AFGHANISTAN AND THE TALIBAN

Hamid Karzai, the president of Afghanistan, travelled to Pakistan, on 26th August. There he took part in talks with Nawaz Sharif, Pakistan's prime minister. The two men said that they hoped to find a way of ending the fighting in both of their countries.



Hamid Karzai and Nawaz Sharif

The war in Afghanistan has been going on for 12 years. It began when the USA led an invasion of the country in 2001. This was shortly after a militant group, called al-Qaeda, had attacked the USA. Then al-Qaeda had its training camps in Afghanistan. At that time the Taliban ruled the country under very strict Islamic laws. The USA demanded that it hand over the al-Qaeda leaders who were in Afghanistan. When the Taliban refused the USA invaded.

However, the Taliban was not defeated. Many of its fighters moved to the southern mountainous areas close to the border with Pakistan. The fight against the Taliban and al-Qaeda has continued. Since 2001 other nations have also sent troops to Afghanistan. Most have been

from NATO (North Atlantic Treaty Organization) member countries.

The USA helped to organise a presidential election a few years after its invasion. Mr Karzai was declared to be the winner. Since then he has won another election. However, Mr Karzai has announced that he plans to stand down next year, when the next presidential election is held.

While American and NATO forces have been in Afghanistan they have helped to train a new Afghan army and police force. Now the country has its own security force of about 350,000 troops and police.

There are still around 97,000 NATO, or foreign, troops in Afghanistan. Most are from the USA. Nowadays these foreign troops do not take part in any fighting. Instead Afghanistan's own security forces do this. Nearly all the foreign troops are expected to leave Afghanistan by the end of 2014.

Many people worry about what is going to happen in Afghanistan after the foreign troops leave. Most suspect that the Taliban leaders are waiting for the American and NATO forces to go. Once this happens the Taliban may be able to defeat the Afghan security forces and take control of the country again. The USA would like peace talks to be held with the Taliban leaders. However, Mr Karzai and the USA have disagreed about how these talks should be arranged.

Before the American invasion of Afghanistan in 2001 military leaders in Pakistan worked closely with the Taliban. After the war began the USA often accused Pakistan of helping the Taliban. Pakistan's leaders insisted this was not true. In recent years there has been fighting between Taliban supporters in the

north of Pakistan and the Pakistani army. Some senior members of the Taliban have been captured in the country. They are now being held in Pakistani prisons.

The talks between Mr Karzai and Mr Sharif took place in Islamabad, the capital of Pakistan. Mr Sharif became Pakistan's new prime minister after an election was held three months ago. Mr Sharif offered to help. He explained that it might be possible for his country to arrange peace talks with some of the Taliban's leaders. Mr Sharif declared that he wanted to end the fighting in both Afghanistan and Pakistan. ■

MICROSOFT AND NOKIA

On 3rd September the Microsoft Company announced that it would be buying Nokia's mobile phone business. Steve Ballmer, the boss of Microsoft, said that the price his company had agreed to pay for this part of the Nokia Company was €5.4 billion (£4.6 billion).

Nokia is based in Finland. The company is over 100 years old. It used to make many different things. However, in the 1980s Nokia became one of the first companies to start making mobile phone handsets.

The Microsoft logo is displayed in a bold, black, sans-serif font. It is centered within a light beige rectangular background.

Nokia used to sell more mobile phones than any other company. Even though it still sells many handsets the Samsung Company, from South Korea, has overtaken it. Today, it's thought that, of all the phones sold worldwide, around 3% are made by Nokia. Yet this figure used to be 48%. In recent years

smart phones have become more popular. The reason Nokia has been selling fewer handsets is because it has been slow to develop and make smart phones.

Apple was the first company to make a successful smart phone. Since then other companies such as Samsung, LG and HTC have produced them. Yet unlike Apple these companies make only the handsets. For operating systems, or the software used on the phone, Samsung, LG and HTC all use the Android Mobile Phone operating system. Google makes this.

The Nokia logo is displayed in a bold, blue, sans-serif font. It is centered within a light beige rectangular background.

Several years ago Nokia designed its own smart phone software called MeeGo. This took the company a long time to develop. Yet Nokia smart phones using its MeeGo software did not sell very well.

In 2010 the person in charge of Nokia was replaced. Stephen Elop was appointed as the company's new boss. Mr Elop, who is from Canada, used to work for Microsoft. He is the first boss of Nokia who does not come from Finland. Soon after starting his new job Mr Elop decided the company's lack of a bestselling smart phone would cause problems in future.

Microsoft has its headquarters in the USA. It is one of the world's most successful companies. It's thought that over 95% of all the computers in the world use Microsoft software. Yet Microsoft has been slow to set up successful mobile and internet-based products. Many people now think it will never be able to [compete](#) with companies such as Google and Apple.

In 2010 Microsoft launched its own mobile phone operating system called Windows Phone. It then had to persuade mobile phone handset makers to use its new smart phone software. By doing this it began to compete directly with Google's Android.

In 2011 Mr Elop made a difficult decision. He decided that Nokia would give up trying to make its own smart phone software. Instead he set up a partnership with Microsoft to use its Windows Phone operating system.

Since Nokia has been using Windows Phone its smart phones sales have increased. Yet it is still a long way behind Samsung and Apple. As the Microsoft Company will own a phone handset maker it believes it will be now able to compete with both these companies. As part of the agreement around 32,000 people who work for Nokia will become Microsoft employees.

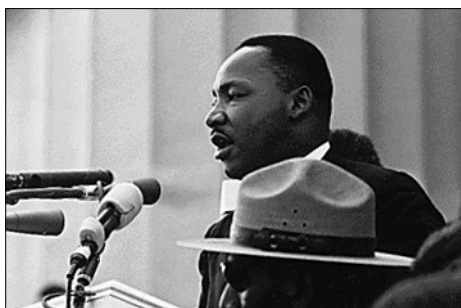
Last month Mr Ballmer announced that he would be stepping down as Microsoft's boss. At the time he said that he would probably stop working within the next 12 months. Now that Microsoft is buying Nokia's mobile phone business many people expect that Mr Elop will take over from Mr Ballmer. ■

'I HAVE A DREAM' ANNIVERSARY

On 28th August, Barak Obama, the American president, spoke at a special event in Washington DC, the capital of the USA. The event was organised to commemorate Martin Luther King's 'I Have a Dream' speech. This famous speech, or address, was delivered on the same day in 1963, exactly 50 years ago.

By 1963 slavery in the USA had been abolished for 100 years. Yet

in some parts of the country black people still experienced racism, or discrimination. For example, there were laws that meant there were separate schools for black and white children. There were 'whites only' signs on things such as public drinking fountains. On buses, if there were not enough seats for everyone, black people had to stand up so white people could sit down.



Martin Luther King Jr speaking in 1963

By the 1950s protests against these **segregation** laws were becoming more frequent. In 1955 a 15-year-old African-American called Claudette Colvin stayed seated on a bus when a white woman was standing up. When Ms Colvin refused to give up her seat, she was arrested.

Martin Luther King Jr (1929 – 1968) was a minister in the Baptist Church. He supported the protests against segregation. King was a very good speaker. People listened to him. He became the leader of what was known as the African-American Civil Rights Movement. King insisted that all civil rights protests should be peaceful, or non-violent.

On 28th August 1963 several civil rights and religious groups organised what they called 'The Great March on Washington'. It was to be a large rally, or demonstration, for 'freedom and jobs' for black people in America. Around 250,000 people took part. About 80% of the marchers were black. They travelled to the

capital city by bus, car, train and aircraft, from all over the USA.

About 20 people made speeches. Each spoke from the steps of the Lincoln Memorial. King was the last speaker. His speech was shown on live television. During it he called for an end to racism. King frequently repeated the phrase 'I have a dream'. For example, part of his speech was 'I have a dream that my four little children will one day live in a nation where they will not be judged by the colour of their skin, but by the content of their character. I have a dream today!'

After 1964, because of the Civil Rights Movement, the American government started passing new laws. These meant that discrimination against anyone because of his or her colour, race, or religion was illegal.

A gunman assassinated King in the city of Memphis in 1968. During his lifetime he was the youngest person ever to be awarded the Nobel Peace Prize.



Martin Luther King Jr memorial

Many people believe that King's 'I Have a Dream' speech is one of history's most famous. Thousands of people took part in the 50th anniversary event. Barak Obama, and several of King's relatives, made speeches from the same place that King spoke 50 years earlier. Mr Obama praised all the Americans who took part in the Civil Rights Movement. Two former presidents

of the USA, Jimmy Carter and Bill Clinton, also attended.

In 2011 a new Martin Luther King Jr memorial was opened near where the civil rights leader made his famous address. In the USA the third Monday of January is a national holiday. Called Martin Luther King Day it commemorates the civil rights leader's birthday, which was on 15th January. ■

FROG MYSTERY SOLVED

Scientists from France have been studying a tiny [amphibian](#) called the Gardiner's frog. These tiny frogs do not have ears. The scientists believe that they have now managed to work out how Gardiner's frogs are able to hear.

Gardiner's frogs are brown in colour. Adults grow to just 11 millimetres (0.4 inches) in length. So they are one of the smallest types of frogs in the world. The frogs are only found on the Seychelles, a group of islands, or archipelago, in the Indian Ocean.



Gardiner's frog on person's thumbnail

To hear sounds animals have what is known as a middle ear. Most of the sound waves that reach an animal are reflected off their skin. These sounds can be picked up, or detected, by an eardrum. The sounds cause the eardrum to [vibrate](#). The vibrations are then amplified, or

made louder, by the [chamber](#) of the middle ear. Nerves in the inner ear then transmit, or send, these sound wave signals to the brain. So if an animal does not have a middle ear or eardrums it probably means that it cannot hear anything.

At first, because Gardiner's frogs did not have any ears, they were thought to be deaf. Yet experiments showed that they were able to hear. The frogs make a high-pitched squeaking sound. The scientists recorded some of their sounds. They then played them back to frogs in the wild.

When the sounds were played some wild frogs would squeak back. Others would move so that they were looking in the direction from where the sound was coming. These experiments suggested that the frogs were not deaf. But it was a mystery how they managed to hear anything.

The scientists studied some of the frogs using special X-ray equipment. They wanted to find out which part of the frogs' bodies was acting like a middle ear and how sound waves reached their brains. Using X-rays of the frogs' heads they discovered that their mouths were able to amplify the high-pitched squeaks.

The scientists also discovered that the frogs only have a very thin space between the inside of their mouths and inner ear. This means the sound waves in the mouth can be easily passed to the inner ear and then onto the brain. So the frogs' mouths are acting like a middle ear. Therefore, unlike nearly all other animals, Gardiner's frogs listen with their mouths.

The Seychelles used to be part of India. The islands are believed to have split off, or broken away, about 65 million years ago. The scientists say before this happened there might have been many other

frogs that used their mouths in a similar way. However, over the last 65 million years, these mouth-hearing frogs either died off or evolved to have a middle ear and eardrum. As Gardiner's frogs were [isolated](#) on a group of islands they never changed. ■

SOUTH AMERICAN WINTER

This year's winter in some South American countries has been the coldest for many years. In recent weeks large snowfalls have affected parts of Peru and Bolivia. In Brazil and Paraguay there have been frequent heavy rainstorms.



Snow in the Atacama Desert where several powerful telescopes are located

Weather experts say that the extreme winter weather has been caused by very cold air coming up from Antarctica. This is unusual. The worst affected places have been in the Andes Mountains.

The temperatures in La Paz, the capital city of Bolivia have been about 8°C (14°F) colder than normal. Many roads in the country have been closed because of the snow. Thousands of people in Bolivia work in the country's mines. Yet the deep snow and cold temperatures caused many of these mines to shut for at least seven days.

Snow has even covered parts of the Atacama Desert, in Chile. This is one of the world's driest places. It

hardly ever rains. In recent years a number of powerful telescopes have been set up in the Atacama. Normally there is very little moisture in the air. This moisture can affect the light. Almost every night is clear of clouds. These are the reasons why the Atacama Desert is one of the best places in the world for astronomy.

The cold weather is thought to have killed many people. Hundreds have died in Peru. Ollanta Humala, Peru's president, declared a state of emergency in some parts of the country. He arranged for blankets and medicines to be sent to these places.

In Peru's mountainous areas temperatures often drop to just below 0°C (32°F) in the winter. However, temperatures as low as -24°C (11°F) have been recorded. Lima, the country's capital city, is much warmer. This is because it is on the Pacific Ocean coast. Yet recently the temperature in Lima dropped to 8°C (46°F). This was the capital city's coldest recording for 46 years.

Farm animals and crops have also been affected. In Paraguay it was reported that the cold had killed 4,000 cattle. Around 30% of the country's wheat has been damaged by the cold weather.

In the mountainous parts of Peru around 250,000 alpacas are believed to have died. These animals are similar to llamas, but smaller. Farmers breed alpacas for their fleeces, or wool-like coats. Alpaca fibre is used to make blankets and many different types of clothes. Local farmers say that many of their alpacas died from a lack of food. This was because a thick layer of snow covered the grasses the animals eat.

Weather forecasters say that the snow that fell on many parts of South America was the heaviest for 30 years. ■

PACIFIC FORUM MEETING

The Pacific Islands **Forum** is a group of countries that includes Australia, New Zealand and 13 other Pacific island nations. The group holds an annual meeting, or summit, which normally lasts for three or four days. This year's summit began on 3rd September. It was held in the Marshall Islands.



The Marshall Islands are made up of many coral atolls and a few islands spread over a wide area of the Pacific Ocean. They have a total population of about 68,000. Around a quarter of the people live on Majuro. This is a coral atoll and the Marshall Islands' capital city.

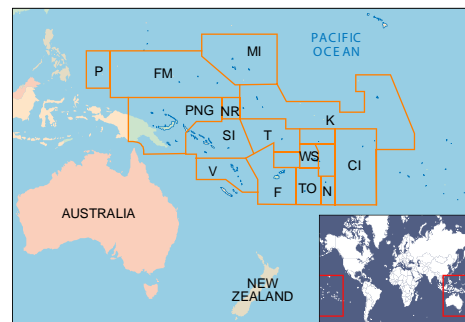
The leader of the country in which the Forum's annual meeting is held is called the 'chair'. He or she organises all the discussions. A secretary-general is appointed to lead the Forum for three years. The current secretary-general is Tuiloma Neroni Slade, from Samoa.

Fiji was an original member of the Pacific Islands Forum. However, in 2009, the other members decided to suspend Fiji's membership. This was because Fiji's military commander deposed the elected prime minister and took control of the country. Australia and New Zealand are the Forum's largest member countries. They insist that Fiji's suspension will continue until a democratic vote takes place and a new leader is elected.

Before the summit began leaders of each member country watched a special ceremony. Hundreds of shark fins, which had been confiscated from a Chinese fishing boat earlier this year, were tipped into the sea.

Two years ago the Marshall Islands created the world's largest shark sanctuary. Sharks are now protected in the seas that surround all its islands and atolls. Added together, this area is roughly two million square kilometres (750,000 square miles).

Some reports say over the last 20 years the number of sharks has fallen by as much as 90%. Sharks are caught for their fins, livers, from which a type of oil is made, and meat. Sharks grow slowly and don't reproduce very often. It can therefore take a very long time for shark populations to increase.



Pacific Islands Forum Members

Australia	Tonga (TO)
New Zealand	Federated States of Micronesia (FM)
Kiribati (K)	Marshall Islands (MI)
Palau (P)	Tuvalu (T)
Solomon Islands (SI)	Fiji (F) (suspended)
Cook Islands (CI)	Niue (N)
Nauru (NR)	Western Samoa (WS)
Papua New Guinea (PNG)	Vanuatu (V)

Shark fin soup is a popular dish in many Asian countries, especially China. The soup is made from the fins of certain types of sharks such as reef sharks. Often a fisherman will catch a shark, cut off its fin and then throw the body back into the sea. This is known as shark-finning.

Anyone found with a shark fin in the protected area now has to pay a fine of US\$200,000 (£128,200). The new rules say any shark caught accidentally must be immediately released.

Nearly all the discussions at the Forum were about climate change and warmer temperatures. Many of the islands in the Pacific Ocean are low-lying. Currently, sea levels in the Pacific are thought to be rising by about 1.5 millimetres (0.06 inches) per year. Most scientists expect this to continue. The rise in sea levels, they say, is happening because more ice at the North and South Poles is melting.

Many of the Forum's leaders now fear that, in future, some of their islands will be completely covered by the sea. Plans, they insist, have to be made. If sea levels continue to rise people living on low-lying islands will need to move to other places. ■

RICE PICTURES

Each year people living in a small village, called Inakadate (pronounced ee-NAH-kah-dah-tay), in Japan, create some unusual artworks. Nowadays around 200,000 people travel to the village at this time of the year. They do this to see the village's 'paddy art'.

Each spring about 1,200 people who live in the village help to plant rice in a number of paddy fields. They use different varieties, or types, of rice plants. As the plants grow they turn into green, yellow, dark red or white colours. The different coloured rice is planted in a special pattern. Then, when they are fully grown, the plants form pictures in the rice fields. To see the pictures they need to be viewed from a high place. So the villagers built a tower. From the top of this tower it is possible to get a good view of the pictures formed by the rice plants.

About 20 years ago officials decided that they needed to attract

visitors to their village. They wanted to do this to raise some money. One of the village officials saw children planting rice as part of a school project. They used two different coloured plants. This gave him the idea of making giant pictures out of coloured rice plants.

At first the picture designs were simple. Drawings were made of the design. This was then sketched out in the field in a larger size. The villagers were then told where to plant the different coloured rice. For the first nine years the villagers created a simple outline of a nearby mountain.



Rice field pictures in Inakadate, in Japan

However, in recent years the pictures have become much more complicated. Nowadays a special computer programme is used to produce the designs. The computer creates a plan that shows where thousands of stakes, or sticks, need to be placed in the ground. These stakes are the guide to where the different types of rice have to be planted. As they are seen from high up the computer model is needed to work out the correct **proportions** for each picture.

At the beginning of the year the villagers decide what pictures they should create. Past designs have included the famous *Mona Lisa* painting and a picture of Napoleon on a horse. This year's picture is of a samurai, or Japanese swordsman, fighting against a warrior monk.

Village officials say that creating and maintaining the pictures now

costs about ¥3.5 million (£22,400) each year. Visitors who climb to the top of the tower to see the paddy art do not have to pay. However, they are asked to give some money if they wish to. Last year these **donations** came to about ¥7 million (£44,800). ■

LITTLE MERMAID AT 100

On 23rd August several special parties were organised in Copenhagen, the capital of Denmark. The parties, which were for both children and adults, were held to celebrate the 100th anniversary of the city's famous 'Little Mermaid' statue.

The statue is made of bronze. It was placed on top of a rock close to the shore. The mermaid statue, which is only 1.25 metres (four feet) tall, is not far from the city's harbour.

The *Little Mermaid* statue was **unveiled** on 23rd August 1913, or 100 years ago. A wealthy Danish businessman paid for it. In more recent years the statue has become a worldwide symbol of the city of Copenhagen.

The businessman had watched The Little Mermaid ballet being performed in a theatre in Copenhagen. He liked it so much that he decided to get a statue of the woman, who played the Little Mermaid in the ballet, made. The ballet is based on a fairy story that was written by Hans Christian Andersen.

Hans Christian Andersen (1805 – 1875) was a Danish author and poet. He was born in the Danish city of Odense. Andersen wrote books, poems, plays, and almost 160 fairy tales. Perhaps two of his most famous fairy tales are *The Little Mermaid* and *The Ugly Duckling*.

Andersen's first book of fairy tales contained nine short stories. These included *The Tinderbox*, *The Princess and the Pea*, *Thumbelina*, *The Little Mermaid*, and *The Emperor's New Clothes*. At first Andersen's fairy stories were not very popular. Yet by the time of his death, aged 70, he was best known for the many fairy tales he wrote. Andersen's fairy stories have been translated into over 100 languages and are read to, or read by, young children all around the world.



Little Mermaid statue in Copenhagen

Andersen's mermaid story is very sad. In the fairy tale the mermaid rescues a prince after his ship sinks. The mermaid takes him to the shore and leaves him there. The prince does not know that the mermaid rescued him. Having fallen in love with the prince the mermaid asks a sea witch to help her. The witch makes a special potion, or drink. This will make the mermaid's fishtail turn into legs, but she will lose her voice. She meets the prince but cannot speak with him. Later the prince marries someone else.

The mermaid is very upset. Her sisters bring her a special knife that was given to them by the sea witch. If the mermaid uses the knife to kill the prince and then lets his blood fall on her feet she will become a mermaid again. Yet, because she loves the prince, she cannot do it. Instead the mermaid dives into the ocean and turns to sea foam.

Each year more than one million people, who visit Copenhagen, go to see the Little Mermaid statue. In the past the statue has been vandalised, or deliberately damaged. However, each time this has happened it has been repaired.

As part of the 100th anniversary celebrations there were parades and music concerts. Swimmers also formed the figure '100' in the sea close to the statue. ■

ANCIENT TREE CUT DOWN

Officials in Hong Kong, in China, have decided to fell, or cut down, one of the city's oldest trees. They explained that the 400-year-old banyan tree had to be cut down as it had become infected with a fungal disease.

Banyan trees originally came from what is now India and Pakistan. Today they can be found growing in many warmer countries. The trees are very distinctive. This is because some of their roots hang from their branches. When these reach the ground they can eventually grow into thick trunks. This means that as the tree grows its many trunks gradually cover a bigger and bigger area.

In India some large banyan trees are traditional meeting places. They provide shelter and shade. Banyan trees are sacred to both Hindus and Buddhists. This is why they can often be found around temples, where they may have been planted hundreds of years ago.

The banyan tree in Hong Kong was growing in a park in a part of the city called Kowloon. Because of its size the tree was known as 'King Banyan'. The tree's main trunk was about four metres (13 feet) wide. Its canopy, or the area covered by its

branches and leaves, was over 30 metres (98 feet) across.

Officials admit that a mistake was made in 1998. Then, a decision was taken to make the area of the park where the tree was growing, level, or flatter. Parts of the tree, which were close to the ground, were buried under extra soil and concrete. Experts say that this damaged the tree, as it blocked the supply of air, water and nutrients.

In 2007 about one-third of the large banyan tree's branches were blown down during a typhoon. Typhoons are powerful storms that bring strong winds and large amounts of rain. These types of storms are known as hurricanes or cyclones in other parts of the world.

Two years later it was discovered that the tree was infected with a fungal disease. This was causing its roots to rot. The hanging roots were sprayed with a fungicide. This is a mixture of special chemicals that are supposed to kill fungi or slow their growth. However, this treatment did not seem to work.



Banyan tree in Hong Kong

Over the last few years several other trees in the same park have become infected with the disease. It's thought that the fungus' spores are carried by the wind or even on people's shoes. Some people now worry that the disease may spread to many older trees in other parts of Hong Kong. Officials therefore decided that cutting down the old

Banyan tree was necessary to try to stop the disease spreading.

‘King Banyan’ must have been growing throughout the Qing [dynasty](#), which ruled China from 1644 to 1912. This was the last dynasty to control China before it became a republic. During this time the tree would not have been in the middle of a large city. Instead it was probably next to a small village and some rice fields. ■

DRESDEN'S NEW BRIDGE OPENS

A new bridge was opened in Dresden, in Germany, on 24th August. Called the Waldschlösschen Bridge it crosses the River Elbe. Work first began on the bridge over ten years ago. Its construction has caused many arguments.



Waldschlösschen Bridge in Dresden

The Elbe is one of the longest rivers in Europe. It flows through the Czech Republic and Germany before entering the North Sea. Dresden, which has a population of about 530,000, is one of the many cities on the river.

In 2004 UNESCO (United Nations Educational, Scientific and Cultural Organization) decided that an 18-kilometre (11 mile) long part of the Elbe Valley around Dresden was a World Heritage Site. This was because of the [meadows](#) on either side of the river and a number of older buildings. Some of these

buildings are large palaces that date back to the 18th and 19th centuries.

UNESCO is part of the United Nations (UN). One of its jobs is to decide which places in the world are World Heritage Sites. Countries can apply to UNESCO to have a place or building included on the list of World Heritage Sites. A group called the World Heritage Committee meets every year. It discusses these [applications](#). The committee then makes a decision whether or not they are to be included on the list.

World Heritage Sites can be related to human history and culture. For example, several historic cities are on the list, including Brugge, in Belgium, and the fortified town of Havana, in Cuba. Cultural sites can also be important buildings, such as the Taj Mahal, in India, and the Tower of London, in the UK.

In addition World Heritage Sites can be something to do with the natural world, or part of a country's geology. Australia's Great Barrier Reef, the world's largest coral reef system, and the Galápagos Islands, which are home to many rare plant and animal species, are examples. Countries have to agree to preserve places that are listed as World Heritage Sites.

UNESCO said that the Elbe Valley around Dresden was a [unique](#) 'cultural landscape'. This meant the landscape was a combination, or mixture, of work done over a long time by both nature and humans.

Before building work started a vote was held in which people living in Dresden could take part. Most voted for the bridge to be built, as it would help to improve local traffic problems.

However, in 2006 UNESCO warned that the building of a large modern bridge across the Elbe near Dresden would ruin the landscape.

It said that if the bridge building work continued the valley would lose its World Heritage status. UNESCO suggested that if a crossing was needed a tunnel should be dug under the river.

Soon after UNESCO's complaint, construction of the bridge was halted. Yet the following year a German court ruled that this was unlawful, so building work restarted.

In 2009, because of the bridge, UNESCO officially declared that Dresden's Elbe Valley was no longer a World Heritage Site. This is very unusual. The only other World Heritage Site ever to be 'de-listed' is an animal [sanctuary](#), in Oman. This was set up to protect a type of rare antelope. Called the Arabian oryx it is an endangered species. UNESCO took the sanctuary off the list of

NEWSCAST

REDHEAD DAYS — A special event was held between 30th August and 1st September in Breda, in The Netherlands. People from many different countries took part. Called Redhead Days, it was for people who are redheads or have ginger hair. About 5,000 people travelled to the town. Many were friends and family members, so not everybody had red hair. However, during the gathering the world record for the most redheads in one place, 1,672, was set. It is thought that about 1% of the world's population are redheads. Scotland, which is part of the UK, and Ireland are believed to have the most as a percentage of their population. About 13% of people in Scotland have ginger hair and in Ireland 10% are redheads. In Scotland an airline company arranged a special 'for redheads only' flight to take people to Breda.

World Heritage Sites in 2007. This was after officials in Oman reduced the size of it by 90%.

On the day it opened, the bridge was closed to cars and trucks. Thousands of people walked across it. Two days later road traffic was allowed to cross the new four-lane bridge for the first time. ■

IO ERUPTION RECORDED

Scientists working at NASA (National Aeronautics and Space Administration) have recorded a huge volcanic eruption on one of Jupiter's rocky moons called Io. The eruption, they say, is one of the biggest that has even been seen in the Solar System.

Io is about the same size as our Moon. It has over 400 large volcanoes. These produce huge amounts

of sulphur and sulphur dioxide. This is why Io looks yellow. Io is the most volcanically active object in the Solar System. The flows of lava from Io's many volcanoes cause the moon's surface to constantly change. Io also has more than 100 large mountains. Some are higher than Mount Everest, the tallest mountain on the Earth.

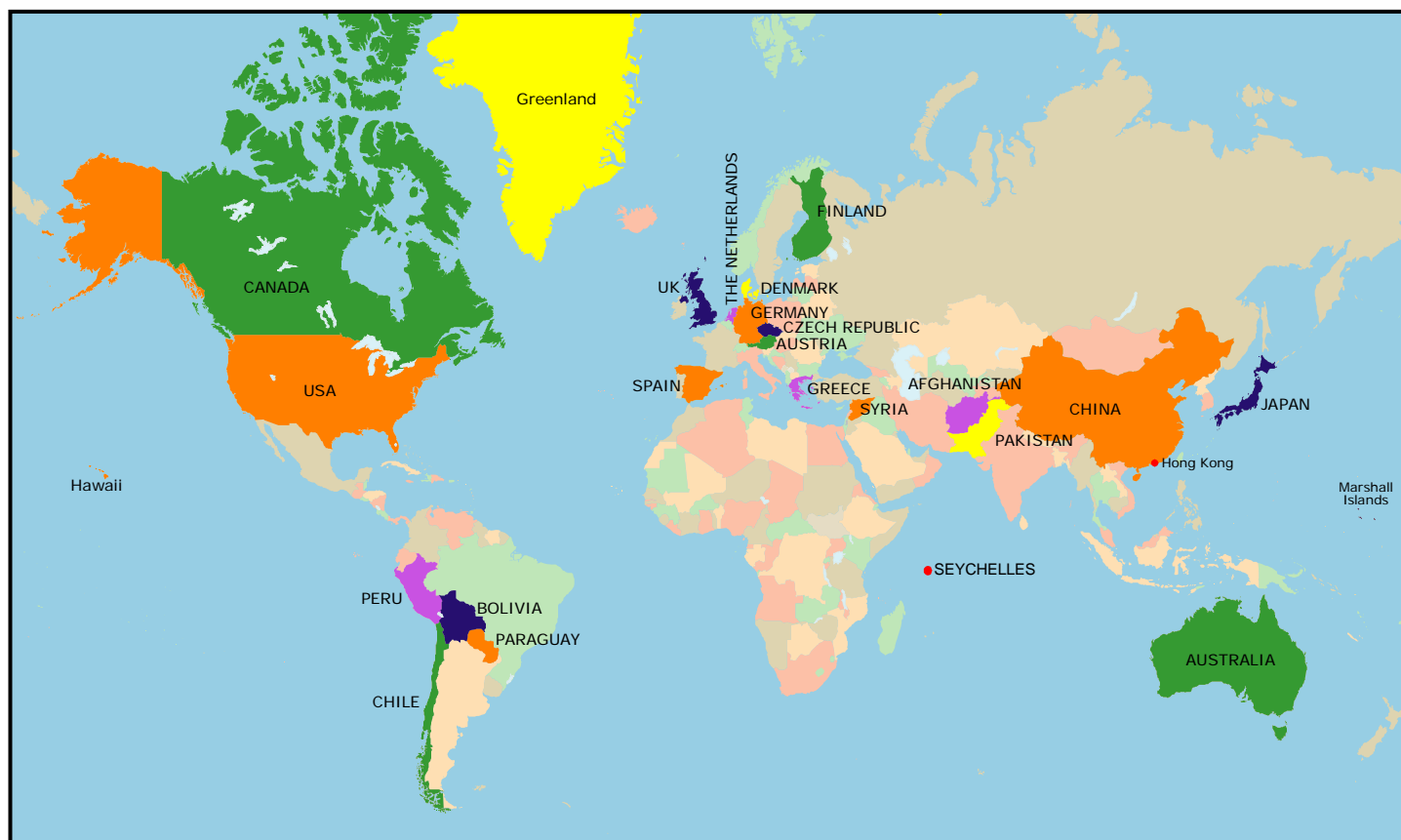
Jupiter is the largest planet in the Solar System. It is what's known as a gas giant. Other gas giants are Saturn, Uranus and Neptune. Jupiter may have as many as 67 moons, or satellites. Most have been discovered in recent years. Many of these moons have a diameter of less than ten kilometres (six miles).

Jupiter's four largest moons are called Io, Europa, Ganymede and Callisto. These four are known as the Galilean moons. They are named after Galileo Galilei (1564 – 1642).

Galileo was an Italian mathematician and scientist. He was the first person to use a telescope (a new invention at that time) to look at the stars and planets. Between 1609 and 1610, with the use of a telescope, Galileo discovered Jupiter's four biggest moons.

The names of the Galilean moons come from Ancient Greece. In Greek mythology Zeus was 'the father of gods and men'. Io, Europa, Ganymede and Callisto were four of Zeus' lovers. Of all Jupiter's moons Io is the closest to the planet. Scientists say that this is the likely reason for the moon's volcanic activity. All the time, the forces of gravity from Jupiter and the three other Galilean moons are pulling at Io. This constant movement causes the rock below the moon's surface to heat up.

Io has no, or little, atmosphere. Its gravity is very low. This means that



This map shows countries to which news stories refer in this issue. Visit www.newsademic.com for more detailed world maps.

its volcanic eruptions reach much greater heights than they would on the Earth. The latest eruption is believed to have covered an area of about 30 square kilometres (11.5 square miles). The volcanic areas of Io all have different names. These are named after fire and thunder gods from ancient legends. The recent eruption was in an area called Rarog Patera. Rarog was a legendary Czech fire god. Patera means 'shallow craters'.



Eruption on Io (NASA)

A powerful telescope on Hawaii recorded the latest eruption on Io. Called the Keck Observatory it happens to be on top of a high volcano. Hawaii, which is in the Pacific Ocean, is part of the USA. ■

TICKETS FOR TOMATO FIGHT

Thousands of people took part in 'La Tomatina' on 28th August. The festival takes place in the town of Buñol, in Spain. Some people describe it as 'the world's biggest food fight'. Those wishing to take part this year had to pay to do so for the first time.

La Tomatina is held on the last Wednesday of August. The main part of the festival is an hour-long tomato fight. People crowd into a square in the centre of the town and throw tomatoes at each other. Nowadays all the tomatoes have to be squashed before the 'fight' begins.

La Tomatina dates back to the 1940s. Then, a group of young

people started throwing tomatoes at each other. They took the tomatoes from market stalls in the square in the centre of the town. The police stopped the fight. They forced those involved to pay for the damage that had been caused.

The following year, on the anniversary of the tomato fight, the same group decided to do a similar thing. But this time they brought their own tomatoes and started throwing them at other people as well. Once again the police stopped the fight.

On each anniversary more and more people took part in the tomato fight. Eventually, local officials declared that they would organise a special annual event, or festival. However, they said all those who wanted to join in must follow special rules. One rule was that the tomatoes had to be squashed. This was to stop anybody from getting injured.

Today the tomatoes used are specially grown for the festival. Before the start of the fight six large trucks, fully loaded with squashed tomatoes, drive into the town. Soon afterwards the drivers tip, or dump, the tomatoes in the square.

Many of those taking part wear shorts, swimming goggles and shower caps. Some bring umbrellas. Nowadays people come from all over the world for the festival. At the end of 60 minutes a signal is given and the tomato fight stops. Shop owners protect the fronts of their stores by covering them with large plastic sheets.

In recent years the number of people travelling to Buñol for La Tomatina has been increasing. This meant the festival began to cost the town more and more money. The tomatoes, extra police, ambulances and security officials all have to be paid for. Another problem was that

there were too many people. Last year around 40,000 arrived in Buñol to take part in the food fight.



Buñol's La Tomatina festival

To stop overcrowding and to help pay for the festival, town officials decided that people would now have to pay to take part. This year there was a minimum ticket price of €10 (£8.40). For €750 (£633) a person could stand on one of the six trucks that bring the squashed tomatoes into the square. Around 5,000 free tickets were given to people who live in the town.

Officials estimate that the cost of this year's La Tomatina was €140,000 (£118,000). Around 20,000 people took part. Many were from Australia, Japan, the UK and the USA. This year the food fight took place during a rainstorm. Most of those throwing squashed tomatoes were between the ages of 18 and 35. Officials said that the oldest person to buy a ticket was 82. ■

WORLD'S FASTEST TRAIN

On 29th August a railway company in Japan began tests, or trials, of its new L0 (L zero) maglev train. The new train is able to reach speeds of over 500 kilometres (310 miles) per hour.

Maglev is short for magnetic levitation. Instead of using wheels a maglev train travels along a single central rail, or monorail. It does this by using magnetic power.

A magnet has a north and south pole. The Earth is like one big magnet. If you tie a piece of string to a magnet and hold it up in the air, its 'north' will point towards the Earth's North Pole. The magnet's 'south' will point in the direction of the South Pole.



L0 maglev train (JR Central)

When held close together the opposite poles of two magnets will stick together. Yet when the same poles are held near each other they repel, or push away. Magnetic forces underneath a maglev train and in the monorail repel each other. The train therefore 'floats' above the central rail. The magnets 'pushing away from each other' can also be used to make the train go forward.

Engineers in Japan have been making fast trains for many years. Japan was the first country to use what became known as 'bullet trains', or *Shinkansen*, in the 1960s. As Japan is a country where there are many earthquakes engineers also invented special sensors. These automatically stop trains when an earthquake is detected.

To start the L zero trial a special test track had to be extended, or made longer. This work has only recently been completed. The test track, which is now 42.8 kilometres (27 miles) long, took over five years to build.

The railway company plans to build a maglev track between Tokyo, the country's capital, and the city of Nagoya. This is a distance of 286

kilometres (178 miles). The travelling time between the two cities on the new maglev trains is expected to be about 40 minutes. Today, the same journey takes about 95 minutes.

Currently there are only two maglev trains operating in the world. One is in Shanghai in China. It takes passengers from the city's airport to an area of Shanghai called Pudong. This is where many banks and finance companies have their offices. This train travels at speeds up to 431 kilometres (268 miles) per hour. The other maglev train is in Nagoya, in Japan. This train's track is only nine kilometres (5.6 miles) long. Its speed is 100 kilometres (62 miles) an hour. ■

'MEGA CANYON'

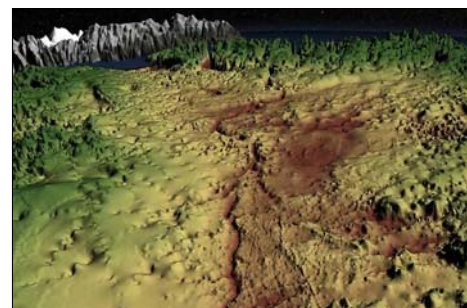
On 29th August a group of researchers announced that they had found the world's longest canyon. They explained that the reason it has only just been discovered is that it cannot be seen. The canyon, which some people have nicknamed 'Mega Canyon', is completely covered by the Greenland ice sheet.

A canyon is a deep ravine, or gorge. It has steep cliffs on either side. A canyon is formed over many millions of years by a river gradually eroding the rocks.

The most famous canyon in the world is the Grand Canyon in the state of Arizona in the USA. The Grand Canyon is the deepest of its kind in the world. It is about 363 kilometres (227 miles) long and, in places, 1.6 kilometres (one mile) deep. Scientists think it has taken the River Colorado, which flows through it, nearly two billion years to erode the surrounding rocks to form the canyon.

Greenland is the world's largest island. It has a population of less than 60,000. Most of the island is under thick ice. In some places the ice is about three kilometres (two miles) deep. Yet an ice sheet has not always covered Greenland. Scientists believe that ice first began to cover the island around 1.8 million years ago.

The researchers were studying radar readings that have been made of Greenland over many years. These were recorded as planes flew over the ice sheet. Radar signals, created by equipment on these planes, were directed at the ice below. The signals go through the ice. When they hit rock they bounce back. The time it takes for the signals to return to the plane is then recorded.



3-D image of northern Greenland showing the newly discovered canyon (NASA IceBridge)

From this information the researchers were able to make a three-dimensional (3-D) 'map' or image of the shape of the rocks under the ice. Many of the radar recordings were part of a NASA (National Aeronautics and Space Administration) project, called IceBridge.

The researchers were surprised when they saw their 3-D map. From the centre of Greenland, running towards the north, was a very long canyon. The researchers say the shape of its sides show that the canyon was formed by running water and not ice. This means it is probably about four million years old. In places the canyon is around 800

metres (2,600 feet) deep and ten kilometres (six miles) wide. The newly discovered canyon is roughly 750 kilometres (466 miles) long. So it is the longest canyon in the world.

Greenland is shaped a bit like a bowl. Its outer part is higher than its central area. For this reason scientists have expected to find large lakes under Greenland's ice. These would be similar to the ones that have been discovered under thick ice in parts of Antarctica. These lakes contain water that is melted by pressure from the weight of ice above or heat, which comes up from deep below the ground.

So far no lakes have been found under the ice in Greenland. The newly discovered canyon may explain why. The researchers say it's possible that any melted water under the ice flows northwards along the canyon and into the sea. ■

INSECTS AND ANCIENT ERUPTION

A team of scientists, based at a university in the UK, believe that they may have worked out the time of year when an ancient volcanic eruption took place. They did this by studying the remains of insects, which were in an ancient storage jar. The jar was found on the Greek island of Santorini.

In ancient times Santorini was called Thera. Around 3,600 years ago Thera exploded in an enormous volcanic eruption. This eruption is believed to have been the largest anywhere in the world for the last 10,000 years.

Today circular-shaped steep cliffs surround a central bay where the centre of Thera used to be. This is known as a caldera. These are formed when the ground sinks or

collapses after an eruption. At Thera the ground sank below the sea. All that remains of the original island is some of its outer parts.



Satellite picture of Santorini

No one knows exactly when Thera exploded. The most accurate date is believed to be between 1627 and 1600 BCE. Ancient buildings have been found on Santorini at a place called Akrotiri. They had been buried under thick layers of ash and pumice from the eruption. Pumice is a type of volcanic rock. It is created when lava and gases erupt from a volcano in shallow water. As the lava and gases cool very quickly, air is trapped in the pumice. This makes it very light and means it will float on water.

About 50 years ago a number of storage jars were found in the ruins of a house in Akrotiri. They contained sweet peas and the remains of some insects. In recent years new scientific methods have been developed to date fossilised insects. Using these the scientists worked out that all the insects died at the same time as the volcanic eruption. The insects were a type of beetle. Inside the jar were larvae, pupae, and adults. So the insects were at different stages of their life cycles.

These types of beetles have one annual life cycle. They only **infest**

sweet peas when they are growing in the fields. They do this in June and July. As the insects were at different stages of their life cycles it suggests that the peas had just been picked and stored. This means that the eruption must have happened in either June or July.

Other scientists will find this information useful. For example, it may help to explain how the huge amount of volcanic ash in the atmosphere spread around the world.

Many believe it was the eruption of Thera that destroyed Europe's first advanced civilisation. Known as the Minoan civilisation it began about 2700 BCE. The Minoans lived on the Mediterranean island of Crete. This large island is not far from Santorini. The eruption must have created huge tsunamis, or giant waves. As these would have struck Crete they probably destroyed most of the Minoan towns and villages.

Some people even believe that the Atlantis legend comes from the Thera volcanic explosion. In the story of Atlantis an island civilisation is destroyed. This happens after the island suddenly sinks and disappears beneath the sea. ■

Newsademic.com

Editor: Rebecca Watson

Acknowledgements:

News story photographs by gettyimages

For further details about Newsademic and subscription prices visit www.newsademic.com

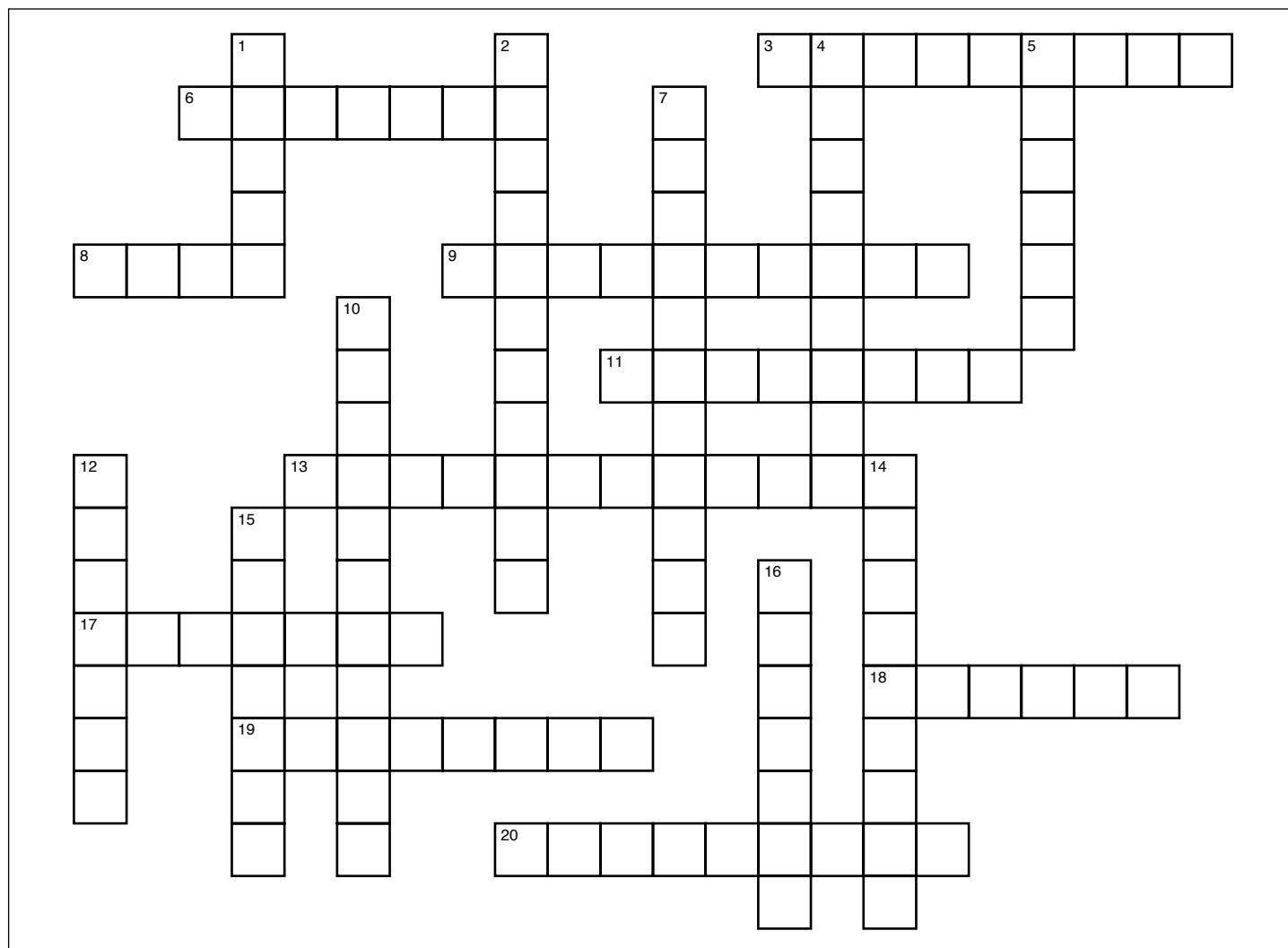
SCHOOL SUBSCRIBERS MAY
PHOTOCOPY ANY PART OF THIS
NEWSPAPER FOR USE WITHIN
THEIR SCHOOL ONLY.

© Newsademic 2013

ISSUE 205

GLOSSARY PUZZLE

INSTRUCTIONS: ① Complete the crossword. The answers are highlighted in orange in the news stories. There are 25 words highlighted and you need 20 of them to complete the crossword. ② Once you have solved the crossword go to the word search on the next page ➡



Across

- 3 Noun** A protected area for birds, sea creatures or animals
6 Verb To try to be more successful than someone or something else
8 Noun A mass of small bubbles formed in or on a liquid
9 Noun Floating in the air without any support
11 Verb Showed or announced something for the first time
13 Noun (Plural) Formal requests seeking permission to do, or join, something
17 Noun A line of powerful people or rulers from the same family
18 Verb To occupy in large numbers (a word especially used of insects)
19 Verb Separated or positioned far away from other places
20 Noun (Plural) Substances that provide nourishment needed for life and growth

Down

- 1 Noun** A meeting at which people exchange their views and opinions
2 Noun Keeping apart different racial groups
4 Noun An animal that is able to live both in water and on land
5 Adjective Remarkable or unusual
7 Adjective Describes something that is easy to recognise because it is different from other things
10 Noun (Plural) Relationships of certain sizes or amounts to others
12 Noun (Plural) Low-lying areas or fields of grassland, often near a river
14 Noun When something, such as the system of government in a country, does not keep changing
15 Noun A type of very hard rock that contains quartz and mica
16 Noun A natural or artificial enclosed space

Issue 205

GLOSSARY PUZZLE *CONTINUED*

A P P L I C A T I O N S R U X A A D
M V J N Q G N N S A N C T U A R Y I
P U E T E P M O C T W Z H C P G Y S
H S T I I T W B Z Z A F O C G A S T
I R I D T T T B X P F B J E U E K I
B S N H R I P G K U U G I F P H X N
I V A L E V I T A T I O N L I C Q C
A K R S B W L K G Z P Y L X I K X T
N E G G M H D Y G R Q F T A A T Y I
A P R I A U J D O U O Q X S M S Y V
E S A C H M P P T A X Y M Z A E Q E
V P A L C T O W M L F E H Y U N S I
C L I N Y R V X U N A W T Q J B Y F
S L R N T C N D R D Y B I T I O S D
M W A I F E H W O U L N G P U F Q P
U Z O B A E C W F Z U N V E I L E D
K N K A G Y S T N E I R T U N T O V
S E G R E G A T I O N T G Z G R U K

INSTRUCTIONS: ③ Find 19 of the 20 crossword answers in the word search. Words can go vertically, horizontally, diagonally and back to front. ④ After finding the 19 words write down the 20th (or missing) word under the puzzle.

Demics are tokens that Individual and Family Subscribers can earn. They are awarded for answering this Glossary Puzzle and/or the Daily News question – accessible by logged in users – correctly. Demics earned can be used by Family and Individual Subscribers in the Newsademic online store.

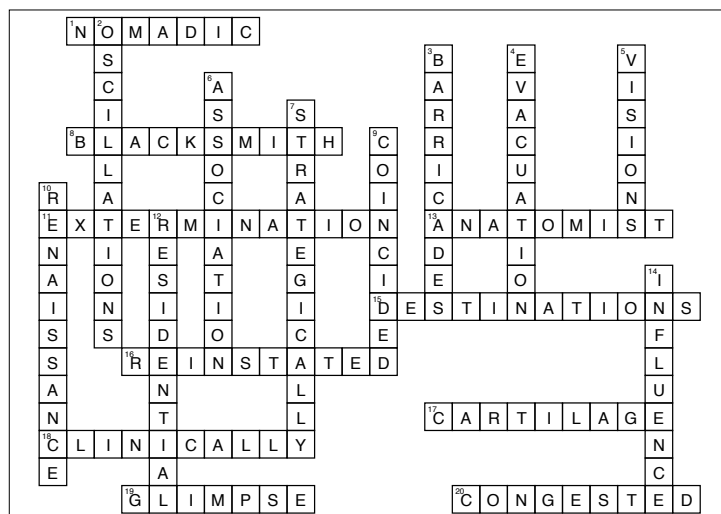


GET EXTRA DEMICS*

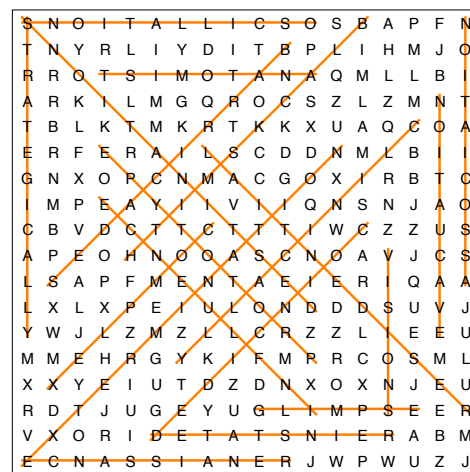
* Only applies to those who have purchased a Newsademic Individual or Family Subscription

If you wish to earn additional Demics log in to www.newsademic.com, go to the Prize Competitions area and submit the missing word. Puzzle entries must be submitted by 10 pm on 18th September 2013 (GMT/UTC).*

MISSING WORD ANSWER =



ISSUE 204 ANSWERS



C O N G E S T E D